

Natural Selection in Action

1. How a population changes in response to the environment
2. The individuals of the population that survive and reproduce are those that are best adapted

3. Examples of Adaptation

a. Adaptation to Hunting

Animals are hunted for certain characteristics. Those that have those characteristics are less likely to survive and reproduce. Those that do not are more likely to.

Example



Elephants with
Tusks



Elephants without tusks

Animals that are able to hide from hunters are more likely to survive and reproduce

Example



Lizards that can blend in vs. those that do not

b. Insecticide Resistance

Insecticides are used to kill insects, but some insects in the population might be resistant to them.

They are able to survive and reproduce.

They pass on the resistance trait to their offspring

More and more insects become resistant after each generation.

Reasons why this happens so quickly

Insects produce many offspring

Insects have a short generation period

(Time between generations-humans is a minimum of 12 years)

c. Competition for Mates

Survival is just step one of evolution, organisms

Must be able to reproduce to pass on their traits

Competition within the population starts and those that are able to attract mates will be successful

Example

Colors- Many female birds are attracted to males with brighter colors



Specification

1. The forming of a new species as a result of Evolution

2. Happens in three parts

- a. Separation

Part of a population becomes separated from the rest of the population. This could be because of a new landform, a storm or humans

- b. Adaptation

Natural selection occurs and because of the different environments, the two groups could establish different traits (like Darwin's Finches)

- c. Division

Over many generations, two separated groups of a population may become very different.

Even if the groups got back in the same environment inbreeding would not occur.

Possible reasons include-

- No attraction

- Different mating times

